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Changes in self esteem or life goals of college students are likely to be related to the degree of success experienced in various types of extracurricular activities. To test this hypothesis, questionnaires containing 8 items requiring self-ratings and 8 items describing desirable accomplishments, aspirations or goals were administered in 1964 and again in identical form in 1965 to students at ten colleges and universities. Eleven of the items were selected for further study. Students reported their extracurricular achievements during college in a variety of areas such as science, leadership and art. Changes on each goal or self-rating were related to the level of accomplishment on one or more achievement scales, presumably related to the goals. The research supported the hypothesis. For example, changes in self-ratings of popularity and in the goal of prominence in public affairs were positively related to achievement in such relevant areas as leadership and participation in social activities. The findings also indicated that changes in self-ratings and life goals were related to the characteristics of the colleges the students were attending. (Author/AM)

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CHANGES IN SELF-RATINGS AND LIFE GOALS AS RELATED TO STUDENT ACCOMPLISHMENT IN COLLEGE

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Summary

Eleven self-ratings of personal characteristics and life goals were readministered after a one-year period to freshman and sophomore students at a sample of ten diverse colleges and universities. At the time of the second assessment, students reported their extracurricular achievements during college in a variety of areas such as science, leadership, and art. Changes on each goal or self-rating were related to the level of accomplishment on one or more presumably related achievement scales. In general, the research supported the hypotheses that changes in the self-esteem or life goals of college students are likely to be related to the degree of success in various types of extracurricular experiences. For example, changes in self-ratings of popularity and in the goal of prominence in public affairs were positively related to achievement in such relevant areas as leadership and participation in social activities. This research also extended the findings of a previous study which implied that changes in the same self-ratings and life goals were related to the characteristics of the colleges the students were attending.

Changes in Self-Ratings and Life Goals as Related to Student Accomplishment in College

Rodney W. Skager and Larry A. Braskamp

In a recent longitudinal study of changes in self-ratings and life goals, Skager, Holland, and Braskamp (1966) observed that groups of students at different colleges showed differing amounts of change over a one-year period. The change measures, which took initial status into account, were in many cases correlated with objective measures of college characteristics. These findings were inconsistent with the conclusions of McCullers and Plant (1964), who maintained that research available up to the time of their review had eliminated the influence of the college as a factor in personality change.

The present research is an extension of our previous work. We are here concerned with whether or not changes on the same self-ratings and life goals are related to specific experiences in college, particularly various types of achievements. While the earlier study compared students at different colleges, this research is based on the combined data from all the colleges but relates change to the level of achievement in various aspects of college life. These comparisons are based on the general notion that success in college social life or academic pursuits will be accompanied by reevaluations of one's own social popularity or by increased confidence in one's ability to compete scholastically.

Method

Data used in this research were taken from a longitudinal study of college students at 39 colleges and universities described in Abe, Holland, Lutz, and Richards (1965). The original questionnaire was administered to freshmen in the Spring of 1964 at 31 of the institutions (Spring Sample) and in the Fall of 1964 at the other 8 institutions (Fall Sample). In the Spring of 1965, a follow-up questionnaire was administered to students still enrolled when members of the Spring and Fall Samples were at the end of their sophomore and freshman years, respectively.

Ten of the institutions were selected for this and the previous study, five each from the Spring and Fall Samples. At one of the selected colleges, data on females were not available. The selection was not designed to provide a representative sample of colleges but rather (a) to maximize variation in institutional characteristics as reported in Astin's (1965) normative summary, and (b) to use colleges, wherever possible, with a relatively high percentage of successful follow-up. For the subsample of institutions studied here, follow-up data were obtained on 62% of the males and 66% of the females. Additional data and comments on the sample are contained in the Skager et al. (1966) report.

Self Ratings and Goals

Eight items requiring self-ratings and eight items describing desirable accomplishments, aspirations, or goals were administered in identical form in the 1964 and 1965 surveys. Six of the former and five of the latter were selected, before processing the data, for further study.

For the self-ratings, students were instructed to "Rate yourself as

you really think you are when compared to the other members of your college class." The following four point scale was used: 1 = Below Average; 2 = Average; 3 = Above Average; and 4 = Top Ten Percent. These are the self-ratings used in this research: Expressiveness, Popularity, Practical-Mindedness, Scholarship, Self-Confidence (Intellectual), and Sensitivity to the needs of others.

For the goal items, students were asked to "Indicate the importance you place on the following kinds of accomplishments, aspirations, goals, etc." The scale used for these items was: 1 = of little or no importance; 2 = somewhat important for you to achieve; 3 = very important for you to achieve, but not essential; and 4 = essential to you, something you must achieve. The goals and aspirations studied were: Being well read, Becoming accomplished in one of the performing arts (acting, dancing, etc.), Becoming influential in public affairs, Following a formal religious code, and Making a theoretical contribution to science.

College Experience Variables

A set of 12 scales eliciting self-reports of non-academic accomplishments during college was available as part of the 1965 American College Survey. Each scale was made up of ten items describing significant achievements in a given area. The student was instructed to answer "yes" for those accomplishments he had achieved during college and "no" for those he had not achieved. The scales were scored by counting the number of items answered affirmatively. Reliabilities and other information on these scales are reported in Richards, Holland, and Lutz (1966). The scale titles, followed by a sample item, are:

Art - won a prize or award in an art competition.
Business - served as business manager of a student publication.
Humanities - read one or more classic literary works on my own (not a course assignment).
Leadership - elected to one or more student offices.
Music - composed or arranged music which was publicly performed.
Religious Service - did voluntary work for a religious institution or group.
Science - built scientific equipment on my own.
Social Participation - worked actively in an off-campus political campaign.
Social Science - was hired to work on a research product in the social sciences.
Social Service - worked actively on a charity drive.
Speech and Drama - won one or more contests in speech, debate, extemporaneous speaking, etc.
Writing - wrote an original, but unpublished, piece of creative writing on my own.

Three other measures were included in addition to the achievement scales.

College GPA - Students reported their grade averages for the last term by selecting one of the following: D or lower, D+, C, C+, B, B+, A, or A+.

Special Educational Experiences - The number of affirmative responses to the following list of academic achievements: participation in an NSF scientific research program, membership in an honor society, selection for an undergraduate honors program, participation in an independent study program, and winning a prize or scholarship for academic work.

Interpersonal Competency Scale - This scale differs from the measures listed above in that it is based on self-rating items rather than achievements and was administered as a part of the initial (1964) survey rather than at the follow-up assessment. The 20 items in the scale were derived from the work of Foote and Cottrell (1955), who defined interpersonal competency as the "acquired ability for effective interaction." The items describe characteristics presumably conducive to interpersonal skills such as positive self-regard, good health, and experience in social interaction.

Measure of Change

To reduce regression effects as a plausible hypothsis (see discussion in Skager et al. 1966) comparisons between change in the goals and self-ratings and the various achievement measures were based entirely on

groups of students giving the same initial response. In other words, for a given goal or self-rating those students who initially gave themselves the lowest rating of "1" were compared across levels of achievement, those who initially rated themselves as "2" were compared with one another, etc. Table 1, which classifies the mean 1965 self-ratings on scholarship of males by the initial (1964) self-rating and by the level of college GPA actually attained, illustrates this reasoning. If scholastic achievement in college is related to self-estimates of scholarship, then for each set of students giving the same initial response, the 1965 scholarship self-ratings should increase proportionally with each higher level of academic achievement. This is clearly the case for the comparison provided in Table 1. With only a few exceptions, the mean self-ratings on scholarship within each column tend to rise as the level of achievement increases. For the columns corresponding to the initial self-ratings of "2" and "3", the ranks (appearing in parentheses) bear a perfect relationship to college GPA.

Comparisons

Change on a given goal or self-rating obviously would not be expected to relate to every type of college achievement. For example, change in the relative importance of the performing arts goal bears no logical relationship to the level of college achievement in science, though it might be anticipated that the scientific achievement would be related to the goal of making a scientific contribution. Therefore, for each goal or self-rating, one or more achievement measures were selected on an a priori basis. (These combinations are listed in Table 2 of the Results Section). Data

for the six self-rating items and the five goal items were classified separately by sex, according to the initial response and the level of each selected achievement, as illustrated in Table 1. The number of levels of achievement used varied, depending on response frequency. For the majority of the scales it was possible to use five levels of achievement (scores of 0, 1, 2, 3, and 4 and above). Four levels (0, 1, 2, and 3 and above) were used for achievements in Social Science, Writing, Science and Special Educational Experiences. Finally, seven levels were used for the College GPA and the Interpersonal Competency Scale.

Table 1

Means and Ranks of 1965 Self-Ratings of Males on Scholarship, Classified by 1964 Response and Level of College GPA

	Self-Ratings on Scholarship for 1964			
	1 (low)	2	3	4 (high)
	Self-Ratings for 1965			
College GPA				
D or Lower	1.11 (1)	1,70 (1)	1.96 (1)	3.00 (4)
D+	1.46 (2)	1.71 (2)	1.99 (2)	2.22 (1)
C	1.78 (3)	2.03 (3)	2.27 (3)	2.62 (2)
C+	1.87 (4)	2.28 (4)	2.55 (4)	2.89 (3)
B	2.20 (6)	2.61 (5)	2.93 (5)	3.17 (5)
B+	2.00 (5)	2.64 (6)	3.43 (6)	3.71 (6)
A or A+	3.00 (7)	3.57 (7)	3.74 (7)	3.93 (7)

Note--Self-Ratings for 1965 are ranked from low to high to clarify the meaning of correlations with other variables.

Results

The basic question is whether or not there is any systematic relationship between change on each goal or self-rating and scales belonging to the selected subset of college achievements. One way of approaching this issue is to compare the ranks of the 1965 goals and self-ratings among the several levels of each achievement. For example, if the obtained college GPA is related to change in self-ratings of scholarship, then irrespective of initial response the ranks of the 1965 self-ratings of scholarship should be similar <u>within</u> each level of achievement, and different <u>between</u> the levels of achievement. Referring again to Table 1 we would thus expect students obtaining a college GPA of "D or Lower" to have the lowest ranks, regardless of their initial self-rating. A means of testing the expectation that the sums of ranks differ between the rows of Table 1 is provided by the Friedman Analysis of Variance by Ranks (Siegel, 1956). Chi square approximations generated with this test are summarized separately by sex in Table 2 for each of the selected combinations of a goal or self-rating with a presumably relevant college achievement.

The data in Table 2 reveal that exactly half of the hypothesized comparisions are statistically significant at the .05 level or less. This result supports the hypothesis that a variety of achievement experiences in college are correlated in some systematic way with a student's changes in self-ratings and life goals.

The statistical tests in Table 2 merely identify each combination for which some type of systematic relationship exists. No indication of the

Table 2

Relationships Between Changes in Self-Ratings and Life Goals and Level of Accomplishment in Relevant College Activities

	Male		Female	
	X^2	p	X^2	p
SR Expressiveness vs.				
Art	10.85	.05	6.60	--
Speech & Drama	5.65	--	8.95	.10
SR Intell. Self-Conf. vs.				
College GPA	15.17	.02	16.34	.02
Educational Experiences	6.30	.10	3.30	--
Humanities	4.40	--	11.20	.05
Science	6.23	--	5.70	--
Social Science	5.70	--	6.30	.10
SR Popularity vs.				
Interpersonal Competency	19.88	.01	14.50	.05
Leadership	12.85	.02	12.75	.02
Social Participation	7.40	--	11.75	.02
Social Service	5.55	--	9.65	.05
SR Practical Mindedness vs.				
Business	8.20	.10	9.15	.10
SR Scholarship vs.				
College GPA	21.81	.01	23.74	.001
Education Experiences	9.98	.01	12.00	.001
SR Sens. Needs Others vs.				
Leadership	7.20	--	4.85	--
Social Participation	8.80	.10	6.20	--
Social Service	3.95	--	10.65	.05
G Being Well Read vs.				
Humanities	14.20	.01	15.40	.01
Writing	9.23	.02	6.90	.10
G Performing Arts vs.				
Music	14.85	.01	12.40	.02
Speech & Drama	10.05	.05	8.80	.10
G Public Affairs vs.				
Leadership	10.80	.05	11.80	.02
Social Participation	10.00	.05	13.45	.01
Social Service	11.60	.05	8.65	.10
G Religious Code vs.				
Religious Service	10.00	.05	11.00	.05
G Science Contribution vs.				
Educational Experience	7.00	--	4.10	--
Science	7.78	--	*	--
Social Science	2.10	--	*	--

*Females reported so few achievements in science and social science that computation of the Friedman statistic was not warranted.

direction of the relationships can be gleaned from this information. One way of answering the question of whether or not the achievements were positively related to each goal or self-rating is to compute correlations between the levels of each achievement and the 1965 goals and self-ratings. More specifically, for each combination of an achievement with a goal or self-rating, Spearman rank correlations were computed between the achievement measure, ranked from low to high, and the rank of the 1965 responses, separately for each column of initial (1964) goal or self-rating. The four resulting Spearman coefficients for each combination were averaged to give an overall measure of relationship. These average correlations are reported in Table 3 for those combinations which appeared to be related on the basis of the test provided by the Friedman statistic.

There is no statistical test available for testing the significance of averaged Spearman rank correlations. Therefore, the coefficients in Table 3 should be interpreted primarily as an indication of the direction of relationships already observed to be of a systematic nature. While many of the correlations are of an unusually high magnitude, it will be recalled that they are based on ranked group means. For example, the perfect correlation for females between Special Educational Experiences and self-ratings of scholarship means that, within each of the four groups giving the same initial self-ratings on scholarship, the mean 1965 self-ratings increase in magnitude with each succeeding level of the achievement measure.

The Spearman correlations in Table 3 are all positive as hypothesized and reveal no outstanding differences between the sexes. Changes in

Average Spearman Rank Correlation Between

College Achievement and Change in Self-Ratings and Goals

	Male	Female
SR Expressiveness vs.		
Art	.57	.60
Speech and Drama	.57	.67
SR Popularity vs.		
Interpersonal Competency	.42	.77
Leadership	.87	.89
Social Participation	.55	.83
SR Practical Mindedness vs.		
Business	.68	.29
SR Intell. Self Conf. vs.		
College GPA	.58	.79
SR Scholarship vs.		
College GPA	.94	.99
Special Educational Experiences	.84	1.00
G Being Well Read vs.		
Humanities	.93	.98
Writing	.84	.55
G Performing Arts vs.		
Music	.94	.85
Speech and Drama	.77	.68
G Public Affairs vs.		
Leadership	.85	.83
Social Participation	.75	.87
Social Service	.80	.63
G Religious Code vs.		
Religious Service	.83	.63

self-ratings of expressiveness and the goal of accomplishment in the performing arts are evidently related to accomplishments requiring effective self-expression such as the arts, speech, and drama. Self-ratings of popularity and the importance of the goal of prominence in public affairs increase with leadership achievement and participation in social activities. Measures of academic accomplishment in college are related to changes in self-evaluations of scholarship and intellectual self-confidence. The

importance of the goal of being well-read is likewise related to successful experiences with creative writing and to achievement in the humanities.

Discussion

The principal purpose of this research has been to investigate the hypothesis that experiences in college are related to changes in relevant self-evaluations and life goals. The relationships, previously described, between various types of college achievement and the self-ratings and goals appear to provide considerable support for the hypothesis, although the possibility of regression effect has not been unequivocably ruled out.

The earlier study concluded that differential changes in self-ratings and life goals had occurred among students at different colleges and universities.[1] Furthermore, in a number of cases, the changes were related in a meaningful way to characteristics of the institutions. For example, the selectivity of the institution as defined by Astin (1965) was negatively related to changes in self-ratings of scholarship, presumably because students face more rigorous academic competition in such institutions. The present results, based on the same sample, expand the findings by showing that college experiences, in addition to institutional characteristics, correlate with changes in self-ratings and life goals.

The relationship noted between the Interpersonal Competency Scale and changes in self-ratings of popularity is an exception to the above generalization. Unlike the achievement measures, responses to the

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[1]For each college, variances were computed for initial and final responses for each of the life goals and self-ratings. For each of the measures, it was found that at some colleges the final within college variance increased while at others it decreased. This suggests that differential college effects were occurring and makes the alternative hypothesis of simple maturation or regression effects less plausible.

Interpersonal Competency Scale were collected at the initial (1964) assessment and thus provide a predictive rather than a concurrent measure. Moreover, items on this scale do not call for reports of specific achievements but are of a type usually written for personality scales. Students were asked to evaluate their own social skills, persuasiveness, physical energy, self-understanding, etc. Students who score high on the scale are, in effect, telling us that they have the tools needed for social success. Perhaps more important, the Interpersonal Competency Scale is the only measure we have studied that relates an "input" variable (Astin, 1961) to change during college. This single positive finding suggests that a more extensive examination of input characteristics as related to change in college may produce significant results.

Using the same achievement scales at the college level, Richards, Holland, and Lutz (1966) reported that the best predictors of college achievements are similar achievements in high school. For example, students who have achieved in artistic areas in high school are likely to report similar achievements in college. We may assume from this finding that achievement in a given area is not a new experience for many, if not most, of the students in our sample. Why, then, should these presumably familiar experiences be related to changed goals and self-evaluations during college?

A possible answer lies in Sanford's (1966) suggestion that the entering college freshman is characterized by an "instability of self-esteem." In the light of this suggestion it is reasonable to view changes, particularly in self-ratings, as reflecting a process of stabilization of self-esteem based primarily on experiences of success or failure in the roles with

which college students experiment. The same may be true for changes in life goals, since success or recognition in some area is likely to increase its desirability. Thus, insofar as the achievement measures used in this research reflect experiences providing the substance of students' self-evaluations, they are likely to be correlated with changes in related self-ratings and goals.

Perhaps the most interesting implication of this and the previous research lies in the unexplored relationship between the separate concerns of the two studies. We may wonder whether or not institutions with certain characteristics tend to encourage or make possible particular kinds of achievement experiences. Such speculation is quickly aroused by comparing the two sets of findings. For example, we observed in the first study that the size of the institution was negatively related to change in self-ratings of popularity. In the present study we learned that achievement in leadership activities is positively related to the same self-rating. It is likely, then, that the climate of the smaller institution provides successful leadership experiences for a greater proportion of its students, or so we could reasonably expect.

Taken together the two studies support what many educators believe intuitively. Students appear to be influenced by their college experiences in ways that transcend the direct acquisition of academic knowledge. The study of these changes and their correlates may have implications for those who formulate decisions guiding the development of institutions of higher education as well as for the individual student selecting a college.

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